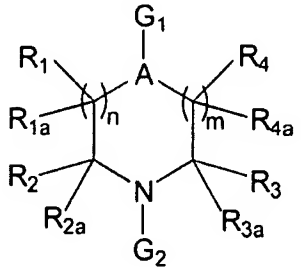
AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application.

1. (Currently amended) A compound of formula



or a pharmaceutically acceptable salt thereof, pharmaceutically acceptable prodrug thereof, an N-oxide thereof, a hydrate thereof or a solvate thereof

wherein

~~G_1 and G_2 are independently L_1-Cy_1 or L_2-Cy_2, provided that when R_1 and R_{1a} or R_4 and R_{4a} taken together form O or S, then G_1 is L_2-Cy_2 and G_2 is L_1-Cy_1; or when R_2 and R_{2a} or R_3 and R_{3a} taken together form O or S, then G_1 is L_1-Cy_1 and G_2 is L_2-Cy_2;~~

G_1 is L_1-Cy_1;

G_2 is L_2-Cy_2;

Cy_1 and Cy_2 are independently selected from ~~optionally substituted aryl,~~ optionally substituted heteroaryl, ~~optionally substituted cycloalkyl, optionally substituted cycloalkenyl, optionally substituted heterocyclyl, optionally substituted heterocyclenyl, optionally substituted fused arylcycloalkyl, optionally substituted fused arylcycloalkenyl,~~ optionally substituted fused arylheterocyclyl, optionally substituted fused arylheterocyclenyl, optionally substituted fused heteroarylcycloalkyl, optionally substituted fused heteroarylcycloalkenyl, optionally substituted fused heteroarylheterocyclyl and optionally substituted fused heteroarylheterocyclenyl;

~~L_1 is O, NR_5, $S(O)_p$, $S(O)_pNR_5$, C(X)Y or L_3-Q-L_4-Q'-L_5;~~

L_1 is -$S(O)_2$-;

L_2 is $C_{(1-4)}$ alkylene;

~~L_3 and L_5 are independently absent, optionally substituted alkylene, optionally substituted alkenylene or optionally substituted alkynylene;~~

~~L_4 is optionally substituted alkylene, optionally substituted alkenylene, or optionally substituted alkynylene;~~

~~Q and Q' are independently absent, O, S, NR_5, $S(O)_p$, $S(O)_pNR_5$ or C(X)Y ;~~

A is ~~CH or~~ N;

R_1, R_{1a}, R_2, R_{2a}, ~~R_3, R_{3a},~~ R_4 and R_{4a} are independently selected from hydrogen, carboxy, alkoxycarbonyl, Y_1Y_2NCO, optionally substituted alkyl, optionally substituted aryl, optionally substituted aralkyl, optionally substituted heteroaryl and optionally substituted heteroaralkyl~~, or R_1 and R_{1a}, R_2 and R_{2a}, R_3 and R_{3a}, or R_4 and R_{4a} taken together form O or S~~;

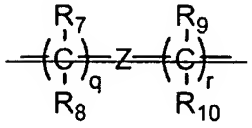
R_3 and R_{3a} taken together form O;

~~m and n are independently 0, 1 or 2, provided that m and n are not both 0 and further provided that when R_1 and R_{1a} taken together form O or S, n is 1 and when R_4 and R_{4a} taken together form O or S, m is 1;~~

m is 1;

n is 1; and

~~L_2 is absent or a group of formula~~



~~R_5 is hydrogen, optionally substituted alkyl, optionally substituted aralkyl, optionally substituted heteroaralkyl, R6O(CH2)v , R6O2C(CH2)x , Y1Y2NC(O)(CH2)x , or Y1Y2N(CH2)v ;~~

~~R6 is hydrogen, optionally substituted alkyl, optionally substituted aralkyl or optionally substituted heteroaralkyl;~~

~~Y^1 and Y^2~~ Y_1 and Y_2 are independently hydrogen, optionally substituted alkyl, optionally substituted aryl, optionally substituted aralkyl or optionally substituted heteroaralkyl, or Y_1 and Y_2 ~~Y^1 and Y^2~~ taken together with the N through which Y_1 and Y_2 ~~Y^1 and Y^2~~ are linked form a monocyclic heterocyclyl.~~;~~

~~R_7, R_8, R_9 and R_{10} are independently selected from hydrogen, hydroxy, alkoxy, optionally substituted alkyl, optionally substituted aryl, optionally substituted heteroaryl, optionally substituted aralkyl and optionally substituted heteroaralkyl, provided that only one of R_7 and R_8 or one of R_9 and R_{10} is hydroxy or alkoxy, and further provided when R_7, R_8, R_9 and R_{10} is hydroxy or alkoxy, then the hydroxy or alkoxy is not α substituted to a N, O or S in Z;~~

~~X is O or S;~~

~~Y is absent or is selected from O, S and NR_5;~~

~~Z is absent or is selected from optionally substituted lower alkenylene, optionally substituted lower alkynylene, O, $S(O)_p$, NR_5, $NR_5C(O)$ and $C(O)NR_5$;~~

~~x is 1, 2, 3 or 4;~~

~~v is 2, 3 or 4;~~

~~p is 1 or 2; and~~

~~q and r are independently 0, 1, 2 or 3, provided that q and r are not both 0;~~

2. (Currently amended) A compound according to claim 1 wherein Cy_2 contains at least one nitrogen atom ~~and when Cy_2 is optionally substituted aryl, optionally substituted cycloalkyl, optionally substituted cycloalkenyl, optionally substituted fused phenylcycloalkyl or optionally substituted fused phenylcycloalkenyl, then said nitrogen atom is a basic nitrogen atom~~.

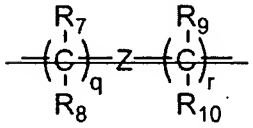
3-4. (Cancelled)

5. (Currently amended) A compound according to claim 4 1 wherein ~~R_3 and R_{3a} taken together are O; and~~ R_1, R_{1a}, R_2, R_{2a}, and R_4 are hydrogen, and R_{4a} is hydrogen or optionally substituted alkyl.

6. (Currently amended) A compound according to claim 4 1 wherein ~~R_3 and R_{3a} taken together are O;~~ R_1, R_2, R_{2a}, and R_4 are hydrogen; and R_{1a} and R_{4a} are independently selected from hydrogen, carboxy, alkoxycarbonyl, Y_1Y_2NCO or optionally substituted alkyl.

7-8. (Cancelled)

9. (Currently amended) A compound according to claim 4 wherein L_2 is alkylene of one to three carbon atoms ~~or a group of formula~~



~~wherein Z is NR_5; q is 2; r is 0; R_5 is hydrogen or optionally substituted alkyl; and R_7 and R_8 are hydrogen~~.

10-11. (Cancelled)

12. (Original) A pharmaceutical composition comprising a pharmaceutically effective amount of a compound according to claim 1 and a pharmaceutically acceptable carrier.

13. (Withdrawn) A method for treating a patient suffering from a physiological condition capable of being modulated by inhibiting activity of Factor Xa comprising administering to said patient a pharmaceutically effective amount of a compound according to claim 1.

14-15. (Cancelled)

16. (Withdrawn) A method of inhibiting Factor Xa comprising contacting a Factor Xa

inhibitory amount of a compound according to claim 1 with a composition containing Factor Xa.

17-22. (Cancelled)

23. (Currently amended) A compound according to claim ~~19~~ 1 wherein Cy_2 is optionally substituted with one or more groups selected from amino, carbamoyl, acylamino, heteroaryl, heterocyclenyl, heterocyclyl, alkyl, alkyloxycarbonyl, amidino, hydroxy, alkoxy, aryl, isourea, guanidino, acylhydrazino, acyl, cyano, carboxy, sulfamoyl, or halo.

24. (Currently amended) A compound according to claim ~~19~~ 1 wherein Cy_2 is optionally substituted with one or more groups selected from amino, hydroxy, or halo.

25-27 (Cancelled)

28. (Currently amended) A compound according to claim ~~19~~ 1 wherein Cy_1 is optionally substituted with one of more groups selected from amino, halo, hydroxyl, aryl, heteroaryl, amidino, alkyl, acylamino, carbamoyl, cyano, alkoxy, nitro, carbamate, sulfamyl.

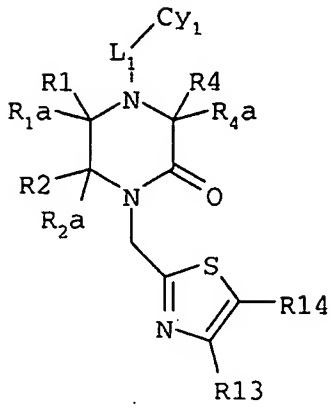
29. (Currently amended) A compound according to claim ~~19~~ 1 wherein at least one of R_1 or R_4 is alkoxyalkyl, alkylthioalkyl, alkylsulfinylalkyl, alkylsulfonylalkyl, alkoxycarbonylalkyl, hydroxyalkyl, acylalkyl, acylaminoalkyl or carbamoylalkyl; and the corresponding R_{1a} or R_{4a} is hydrogen.

30. (Cancelled)

31. (Currently amended) A compound according to claim ~~19~~ 1 wherein at least one of R_1 or R_4 is lower alkyl, carboxy, alkoxycarbonyl or carbamoyl, and the corresponding R_{1a} or R_{4a} is hydrogen.

32-33. (Cancelled)

34. (Currently amended) A compound according to claim ~~19~~ 1 having the formula IIb



IIb

or a pharmaceutically acceptable salt thereof, pharmaceutically acceptable prodrug thereof, an N-oxide thereof, a hydrate thereof or a solvate thereof,

wherein

R_1, R_{1a}, R_2, R_{2a}, R_4, ~~and~~ R_{4a}, L_1 and Cy_1 are as defined in claim 1; ~~are independently selected from hydrogen, carboxy, alkoxycarbonyl, $Y_1Y_2NC(O)$-, optionally substituted alkyl, optionally substituted aryl, optionally substituted aralkyl, optionally substituted heteroaryl and optionally substituted heteroaralkyl, or R_1 and R_{1a}, R_2 and R_{2a} or R_4 and R_{4a} taken together form O or S; or R_1 and R_2 together with the carbon atoms through which R_1 and R_2 are linked form a cycloalkyl group, cycloalkenyl group, heterocyclyl group, or heterocyclenyl group; or R_{1a} and R_{2a} are absent and R_1 and R_2 together with the carbon atoms through which R_1 and R_2 are linked form an aryl or heteroaryl group; or one or more of the pairs R_1 and R_{1a} taken together with the carbon atom through which they are linked form a 3 to 7 membered cycloalkyl or cycloalkenyl group; or R_2 and R_{2a} taken together with the carbon atom through which they are linked form a 3 to 7 membered cycloalkyl or cycloalkenyl group; or R_4 and R_{4a} taken together with the carbon atom through which they are linked form a 3 to 7 membered cycloalkyl or cycloalkenyl group;~~

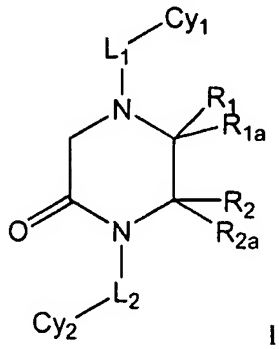
~~Cy_1 are independently selected from optionally substituted aryl, optionally substituted heteroaryl, optionally substituted cycloalkyl, optionally substituted cycloalkenyl, optionally substituted heterocyclyl, optionally substituted heterocyclenyl, optionally substituted fused arylcycloalkyl, optionally substituted fused arylcycloalkenyl, optionally substituted fused arylheterocyclyl, optionally substituted fused arylheterocyclenyl, optionally substituted fused heteroarylcycloalkyl, optionally substituted fused heteroarylcycloalkenyl, optionally substituted fused heteroarylheterocyclyl and optionally substituted fused heteroarylheterocyclenyl;~~

~~L_1 is absent, O, NR_5, $-S(O)p-$, $-S(O)pNR_5-$, $-C(X)Y-$ or $-L_3-Q-L_4-Q'-L_5-$, $-C(O)Y-C(X)Y-$, $-C(X)YC(O)-$, $-C(C)NR_5-S(O)p-$, or $-C(O)C(O)NR_5S(O)p-$;~~ and

R_{13} and R_{14} are independently hydrogen, lower alkyl, aryl, heteroaryl, amino, acylaminoalkyl,

alkoxycarbonylalkyl, carbamoylalkyl or alkoxyalkyl; or R_{13} and R_{14} together with the carbon atoms through which R_{13} and R_{14} are linked form a cycloalkyl group, cycloalkenyl group, heterocyclyl group, heterocyclenyl group, aryl group or heteroaryl group.

35. (Currently amended) A compound according to claim ~~19~~ 1 having the formula IIc



IIc

or a pharmaceutically acceptable salt thereof, pharmaceutically acceptable prodrug thereof, an N-oxide thereof, a hydrate thereof or a solvate thereof,

wherein:

Cy_1 is thiaheteroaryl or azaheteroaryl,

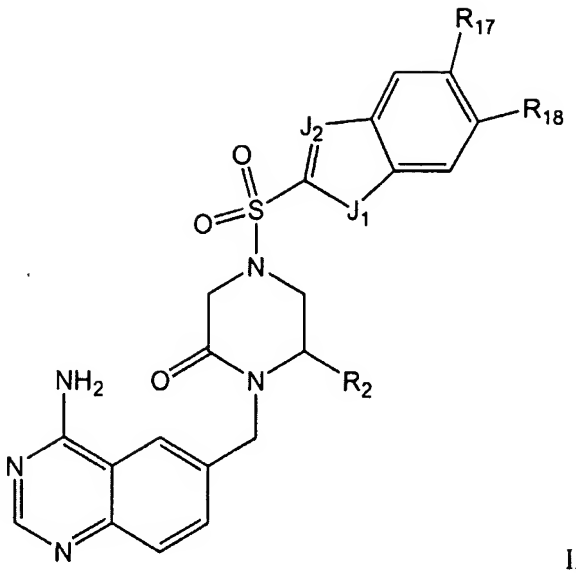
L_1 is $-S(O)_2$~~-, -S(O)$_2$-alkylene-, -S(O)$_2$-alkenlene- or -S(O)$_2$-alkynylene-~~;

R_1, R_{1a}, R_2, and R_{2a} are independently hydrogen, alkyl, carboxyl, alkoxycarbonyl, or carbamoyl;

L_2 is methylene; and

Cy_2 is azaheteroaryl, ~~azaheterocyclyl, azaheterocyclenyl,~~ fused azaheteroarylcycloalkyl, fused azaheteroarylcycloalkenyl, fused heteroarylazacycloalkyl or fused heteroarylazacycloalkenyl.

36. (Currently amended) A compound according to claim ~~19~~ 1 having the formula IId



IId

wherein R_{17} and R_{18} are independently hydrogen or halogen;

J_1 is S or NH;

J_2 is CH or N; and

R_2 is hydrogen, alkyl, carboxyl, alkoxycarbonyl, or carbamoyl.

37-44. (Cancelled)

45. (Withdrawn, but currently amended) A method for treating a patient suffering from a physiological condition capable of being modulated by inhibiting activity of Factor Xa comprising administering to said patient a pharmaceutically effective amount of a compound according to claim ~~1949~~.

46. (Withdrawn, but currently amended) A method for treating a patient suffering from a physiological condition capable of being modulated by directly inhibiting activity of both Factor Xa and Factor IIa comprising administering to said patient a pharmaceutically effective amount of a compound according to claim ~~4349~~.

47. (Original) A method for treating a patient suffering from a physiological condition capable of being modulated by directly inhibiting activity of both Factor Xa and Factor IIa comprising administering to said patient a pharmaceutically effective amount of a compound according to claim 35.

48. (Original) A method for treating a patient suffering from a physiological condition

capable of being modulated by directly inhibiting activity of both Factor Xa and Factor IIa comprising administering to said patient a pharmaceutically effective amount of a compound according to claim 36.

49. (New) A compound according to claim 1 selected from the group consisting of
1-(2-Amino-quinoxalin-6-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-piperazin-2-one,
4-(6-Chloro-benzo[b]thiophene-2-sulfonyl)-1-thieno[2,3-c]pyridin-2-ylmethyl-piperazin-2-one,
4-(6-Chloro-benzo[b]thiophene-2-sulfonyl)-1-thieno[3,2-c]pyridin-2-ylmethyl-piperazin-2-one,
1-(2-Amino-quinolin-6-ylmethyl)-4-(6-chloro-thieno[2,3-b]pyridine-2-sulfonyl)-piperazin-2-one,
4-(6-Chloro-benzo[b]thiophene-2-sulfonyl)-1-(1-chloro-isoquinolin-6-ylmethyl)-piperazin-2-one,
1-(7-Amino-thieno[2,3-c]pyridin-2-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-piperazin-2-one,
4-(6-Chloro-benzo[b]thiophene-2-sulfonyl)-1-quinolin-6-ylmethyl-piperazin-2-one,
1-(2-Amino-quinolin-7-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-piperazin-2-one,
1-(4-Amino-thieno[3,2-c]pyridin-2-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-piperazin-2-one,
4-(6-Chloro-benzo[b]thiophene-2-sulfonyl)-1-isoquinolin-6-ylmethyl-piperazin-2-one,
1-(2-Amino-quinolin-6-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-piperazin-2-one,
1-(1-Amino-isoquinolin-6-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-piperazin-2-one,
1-(1-Amino-isoquinolin-7-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-piperazin-2-one,
1-(4-Amino-thieno[3,2-c]pyridin-2-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-piperazin-2-one,
1-(4-Amino-quinazolin-7-ylmethyl)-4-(6-chloro-thieno[2,3-b]pyridine-2-sulfonyl)-piperazin-2-one,
1-(4-Amino-quinazolin-7-ylmethyl)-4-(6-chloro-1H-benzoimidazole-2-sulfonyl)-piperazin-2-one,
(S)-1-(4-Amino-quinazolin-7-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-3-ethyl-piperazin-2-one,
(S)-1-(4-Amino-quinazolin-7-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-3-methyl-piperazin-2-one,
(+/-)-1-(4-Amino-quinazolin-7-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-6-methyl-piperazin-2-one,
4-(6-Chloro-benzo[b]thiophene-2-sulfonyl)-1-(5-oxy-1H-pyrrolo[3,2-c]pyridin-2-ylmethyl)-piperazin-2-one,
4-(6-Chloro-benzo[b]thiophene-2-sulfonyl)-1-(1-methyl-1H-pyrrolo[3,2-c]pyridin-2-ylmethyl)-piperazin-2-one,
4-(6-Chloro-thieno[2,3-b]pyridine-2-sulfonyl)-1-(1H-pyrrolo[3,2-c]pyridin-2-ylmethyl)-piperazin-2-

one,

4-(6-Bromo-benzo[b]thiophene-2-sulfonyl)-1-(1H-pyrrolo[3,2-c]pyridin-2-ylmethyl)-piperazin-2-one,

4-(5'-Chloro-[2,2']bithiophenyl-5-sulfonyl)-1-(1H-pyrrolo[3,2-c]pyridin-2-ylmethyl)-piperazin-2-one,

2-{2-[4-(6-Chloro-benzo[b]thiophene-2-sulfonyl)-2-oxo-piperazin-1-ylmethyl]-pyrrolo[3,2-c]pyridin-1-yl}-acetamide,

4-(6-Chloro-benzo[b]thiophene-2-sulfonyl)-1-[1-(2-hydroxy-ethyl)-1H-pyrrolo[3,2-c]pyridin-2-ylmethyl]-piperazin-2-one,

4-(6-Chloro-1H-benzoimidazole-2-sulfonyl)-1-(1H-pyrrolo[3,2-c]pyridin-2-ylmethyl)-piperazin-2-one,

4-(1H-Benzoimidazole-2-sulfonyl)-1-(1H-pyrrolo[3,2-c]pyridin-2-ylmethyl)-piperazin-2-one,

4-(6-Chloro-benzo[b]thiophene-2-sulfonyl)-1-(1H-pyrrolo[2,3-c]pyridin-2-ylmethyl)-piperazin-2-one,

4-(6-Chloro-thieno[2,3-b]pyridine-2-sulfonyl)-1-(1H-pyrrolo[2,3-c]pyridin-2-ylmethyl)-piperazin-2-one,

4-(6-Chloro-benzo[b]thiophene-2-sulfonyl)-6-oxo-1-(1H-pyrrolo[3,2-c]pyridin-2-ylmethyl)-piperazine-2-carboxylic acid amide,

(3S,5S)-1-(4-Amino-quinazolin-7-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-3,5-dimethyl-piperazin-2-one,

1-(4-Amino-quinolin-7-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-piperazin-2-one,

1-(S)-(4-Amino-quinolin-7-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-3-methyl-piperazin-2-one,

1-(4-Amino-quinolin-7-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-6-oxo-piperazine-2-carboxylic acid methylamide,

1-(4-Amino-quinolin-7-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-6-oxo-piperazine-2-carboxylic acid ethylamide,

1-(4-Amino-quinolin-7-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-6-oxo-piperazine-2-carboxylic acid dimethylamide,

1-(4-Amino-quinolin-7-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-6-(morpholine-4-carbonyl)-piperazin-2-one,

(+/-)-1-(4-Amino-quinazolin-7-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-6-oxo-piperazine-2-carboxylic acid amide,

1-(4-Amino-quinolin-7-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-6-oxo-piperazine-2-carboxylic acid methylamide,

1-(4-Amino-quinolin-7-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-6-oxo-piperazine-2-carboxylic acid ethylamide,

1-(4-Amino-quinolin-7-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-6-oxo-piperazine-2-carboxylic acid dimethylamide,

1-(4-Amino-quinolin-7-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-6-(morpholine-4-carbonyl)-piperazin-2-one, and

1-(3-Amino-1H-indazol-6-ylmethyl)-4-(6-chloro-benzo[b]thiophene-2-sulfonyl)-piperazin-2-one, or a pharmaceutically acceptable salt thereof, pharmaceutically acceptable prodrug thereof, an N-oxide thereof, a hydrate thereof or a solvate thereof.